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A Quality Assessment of Tourist Information: the Case of Nautical Tourism at Shiretoko Peninsula

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ABSTRACT

The success of tourism promotion in a destination partially depends on the extent to which it successfully links varied products catering to a heterogeneous group of visitors in a multi-client system. In contemporary destination marketing, communication between the service providers at the destination and the (prospective) tourists has become increasingly important as a result of the rise in informal communication channels and social media. This paper focuses on the effect of using different information sources when booking a cruise tour in Shiretoko Peninsula (a natural World Heritage Site) by employing a multi-group structural model. Our findings revealed that a mismatch between the expectation created by the visitors based on the information about the site and the satisfaction they experience when visiting the place can be a strong factor of dissatisfaction, with negative implications on the possible recommendations and loyalty. Additionally, it was possible to conclude that information available on the internet and via guidebooks seems to negatively affect satisfaction on certain elements and routes, while local information from tourist offices, hotels and local shops was found less problematic.

Keywords: Marketing, Information, Satisfaction, Loyalty, Simultaneous Equation Modeling

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Introduction

In a competitive and globalized environment, the success of a tourist destination partially depends on the extent to which varied products cater to a heterogeneous group of visitors in a multi-client system (Romão et al., 2014). Heterogeneity can relate to personal characteristics such as origin, age, level of education and social status, and to more specific holiday-related characteristics such as the main motivations, travel company and accommodation type used. As broadly assumed in the literature, it is important to analyse this market heterogeneity in great detail in order to develop effective marketing strategies (Kozak and Rimmington, 2000; Castro et al., 2007).

One important aspect of any marketing strategy is the communication between the destination on the one hand, and the (prospective) tourist on the other hand. Not only can information serve as an attractor for people still in the decision-phase of travelling, the information also sets a benchmark for expectations regarding the experience a destination has to offer. As such, the information is meant to attract tourists, while at the same time it should provide a realistic image since divergence between expectation and experience can lead to dissatisfaction (Chen and Chen, 2010).

In contemporary destination marketing, this issue has become increasingly important as a result of the rise in informal communication channels, including social networks (Jacobsen, 2011) and the use of different media (Mansson, 2008). Consequently, a destination marketing organization cannot easily control the flow of information. It is essential to monitor both the use of different information sources and the correlation of specific channels with the degree of satisfaction or dissatisfaction experienced.

This paper focuses on the effect of using different information sources when booking a cruise tour in Shiretoko Peninsula (Japan) by employing a multi-group structural model. After introducing the fieldwork setting and the descriptive statistics of the sample, regression results of the structural model are shown and significant differences in model parameters are discussed in light of the research question.

1. Characteristics of the visitors to Shiretoko Peninsula

Shiretoko Peninsula is located in the northeast part of Hokkaido, Japan, and is enlisted by UNESCO as a World Heritage Site since 2005. The Peninsula is a prominent example of a complex ecosystem with high biodiversity featuring land-marine continuity. It is also the lowest latitude in the northern hemisphere where drift ice appears. Very particular geological characteristics and a rich variety of wildlife can be observed here, including species such as killer whales, Steller's sea lions, Blakiston's fish owl, Steller's sea eagles, and white-tailed eagles.

Two surveys conducted in 2011 and 2012 by the Ministry of Environment of Japan at the UNESCO World Natural Heritage site of Shiretoko Peninsula provided the sample for our research. The preparation of the questionnaire started in 2010, aiming to collect useful data for the basic tourism promotion strategy and addressed tourists boarding a boat or a sea kayak in Utoro District to participate in leisure activities on the sea.

Distribution of the questionnaire as a mail-back survey took place at the boat lump for three different types of tourist boats: one large-scale mass-tourism-type ship, seven small-scale pleasure boats and one sea kayak operator. In 2011, a total of 4857 questionnaires was distributed with a collection rate of 23.3%. In 2012, a further 2210 questionnaires were distributed, with a return rate of 24.5%. The final sample consists of 1703 cases, 1140 of which were collected in 2011 and 563 observations belonging to 2012. After analysing personal descriptive statistics separately for the two years, the cases were combined in order to be able to use a larger dataset for the multi-group analysis. The questionnaire collected three broad categories of variables: pre-trip information, information about the current trip taken, and post-trip information.

Table 1 gives an overview of a number of sample characteristics. The group of respondents included a higher number of females (57.3%), with similar frequencies in both the 2011 and 2012 sample. About 10% of surveyed tourists were younger than 30, while, similarly, 10% were 70 years old and above, being indicative of a rather high mean age in the sample. However, since a study of Gokita (2012) among visitors to Shiretoko uncovered similar frequencies of higher age categories, the sample distribution might in fact resemble population frequencies. The vast majority of the respondents, 84.4%, arrived from other areas of Japan than the Hokkaido Prefecture, thus showing the extra-local attractiveness of the tourist site. Respondents mainly arrived as part of a family or group of friends, with fewer than one out of ten being individual travellers. Over 60% of the sample were first time visitors. When specifically asked about having participated in cruise tours from Utoro before, only 16.4% of respondents answered positively. The frequencies do not show large discrepancies between the 2011 and 2012 sample, giving some validation to the results found.

Since Table 1 indicates that the majority of cruise participants had no prior experience, it is interesting to study the source of information used before deciding on the specific cruise package to take. Information found on the internet or in a guide book proved to be the main inspiration source (47.0%). Information from local sources such as hotels, tourist information centres or local shops in Shari town further inspired 13.4% of respondents. Little over one in ten (11.1%) based their decision on recommendations from friends or family. Finally, for about one third of the sample (33.2%) the primary reason for choosing a cruise plan was not based on an individual information search but on a package deal which included that specific cruise.

Almost half of the surveyed visitors (49.4%) participated in a tour with a large boat, while a further 32.3% took part in a small boat tour. Sea kayaking was the least preferred option, with a share of 18.3%, possibly related to the rather high mean age of the respondents. The route undertaken most often passed Cape Shiretoko 50.1%, followed by Kamuiwakka Fall 21.7% and Rusha Bay 8.9%. Other routes (0.4%) were almost not mentioned by the respondents. Almost 20% of respondents gave no answer to the boat route question. This corresponds to the boat type chosen, since sea kayaks most often did not take a predefined route.

Table 1: Descriptive statistics of personal characteristics

	2011 n=1140 Frequency	2012 n=563 Frequency	2011-2012 n=1703 Frequency
Gender:			
- Female	58.2%	55.6%	57.3%
- Male	39.1%	40.7%	39.6%
- No answer	2.7%	3.7%	3.1%
Age:			
- < 30	10.4%	9.9%	10.2%
- 30-39	16.8%	15.1%	16.2%
- 40-59	37.3%	35.9%	36.8%
- >59	33.3%	35.4%	34.0%
- No answer	2.3%	3.7%	2.8%
Origin:			
- From Hokkaido Prefecture	13.9%	13.9%	13.9%
- Not from Hokkaido Prefecture	84.7%	83.8%	84.4%
- No answer	1.3%	2.3%	1.6%
Travel party:			
- Family or friends	60.4%	62.9%	61.2%
- Group	30.6%	27.2%	29.5%
- Individual	7.8%	8.7%	8.1%
- No answer	1.1%	1.2%	1.2%
Visited Shiretoko peninsula:			
- First time visitors	61.5%	60.6%	61.2%
- Repeat visitors	36.7%	38.5%	37.3%
- No answer	1.8%	0.9%	1.5%
Participated in cruise before:			
- Yes	16.3%	16.7%	16.4%
- No, this is the first time	79.6%	79.9%	79.7%
- No answer	4.0%	3.4%	3.8%

Next, Table 2 analyses an interesting relationship between the expectations with which tourists arrived on site and the satisfaction they have received on these elements after the visit. Three main categories were identified: expectations concerning the landscape, the wildlife, and the boat ride. Clearly, the landscape is the main motive for a visit (87.9%), followed by wildlife (65.5%). Only about one out of five respondents were motivated by the boating experience, thus closely resembling the frequency of sea kayak excursions. Ideally, the frequencies of categories between expectations and satisfaction should be in the same order of magnitude to indicate a favourable visitor expectation. While this is indeed the case for the landscape and boating experience, there seems to be a larger discrepancy in the wildlife category. After the trip, only 39.3% of the respondents indicated satisfaction with the wildlife encountered, while

65.5% had found encounters with wildlife to be a major motivation to visit. This might indicate that the satisfaction of visitors is easily affected by the coincidental natural setting on site.

Looking more closely into the two main expectations, a number of specific elements can be identified. The landscape found most attractive pertains more to land-related objects Shiretoko Mountains and the edge of the peninsula and waterfall. This also appears true for the wildlife with bears by far the most popular (55.0%). Nonetheless, whale and dolphin spotting is important for one-fifth of the visitors. In both cases though, the after-trip experience seems to have suffered from the difficulty of actually being able to offer guaranteed spotting opportunities. While birdlife, on the other hand, scores somewhat lower as a main attraction, the expectations here are more closely matched.

Table 2: Descriptive statistics of expectations and satisfaction (n=1703)

	Expectations (before trip) Frequency	Satisfaction (after trip) Frequency
Landscape	87.9%	84.9%
- Shiretoko Mountains	37.7%	30.7%
- Edge of peninsula/waterfall	67.7%	67.4%
- Sea	15.4%	14.8%
Wildlife	65.5%	39.3%
- Bears	55.0%	26.7%
- Whales/dolphins	20.3%	9.9%
- Eagles/seabirds	17.8%	18.1%
Boat	22.5%	19.1%

As could be expected, one of the main elements of dissatisfaction was the fact that visitors could not see the things they had wanted to see during the trip (23.0%). The weather was also a significant factor of dissatisfaction, as were a number of other elements. Nonetheless, 95.7% of valid respondents would recommend the destination, while 95.1% indicated willingness to return.

2. Influence of information used on cruise satisfaction

The motivational pattern of visitors, their satisfaction levels, and the (needed or provided) information offer a complex set of relationships. In order to test whether the source of information used had a significant impact on satisfaction with different elements of the cruise, a path model with group analyses is proposed. To this purpose, the sample is sub-divided into three groups: visitors who informed themselves via internet or a guidebook, tourists that used information from local sources (tourist information office, hotels or local shops in Shari town), and finally tourists that did not use either of both sources for information. This final group thus encompasses people who did not search for any information and visitors that were influenced by

recommendations of family and friends. Priority was given in the analysis to information sources that could be monitored and controlled by a tourist board, while the frequency distribution of the sample over the different boating categories was also important for model convergence. The structural equation modelling software AMOS 19.0 was used for this part of the analysis. While AMOS is ideally suited to constructing both a measurement and a structural model, the lack of latent variables in our model made it possible to immediately estimate the structural components. The path model shown in Figure 1 demonstrates adequate fit indices $\chi^2/\text{Df} = 1.207$, CFI = .996, RMSEA = .011, $\chi^2(62) = 74.864$ (p-value = .127) and led to the variable estimates shown in Tables 3 and 4.

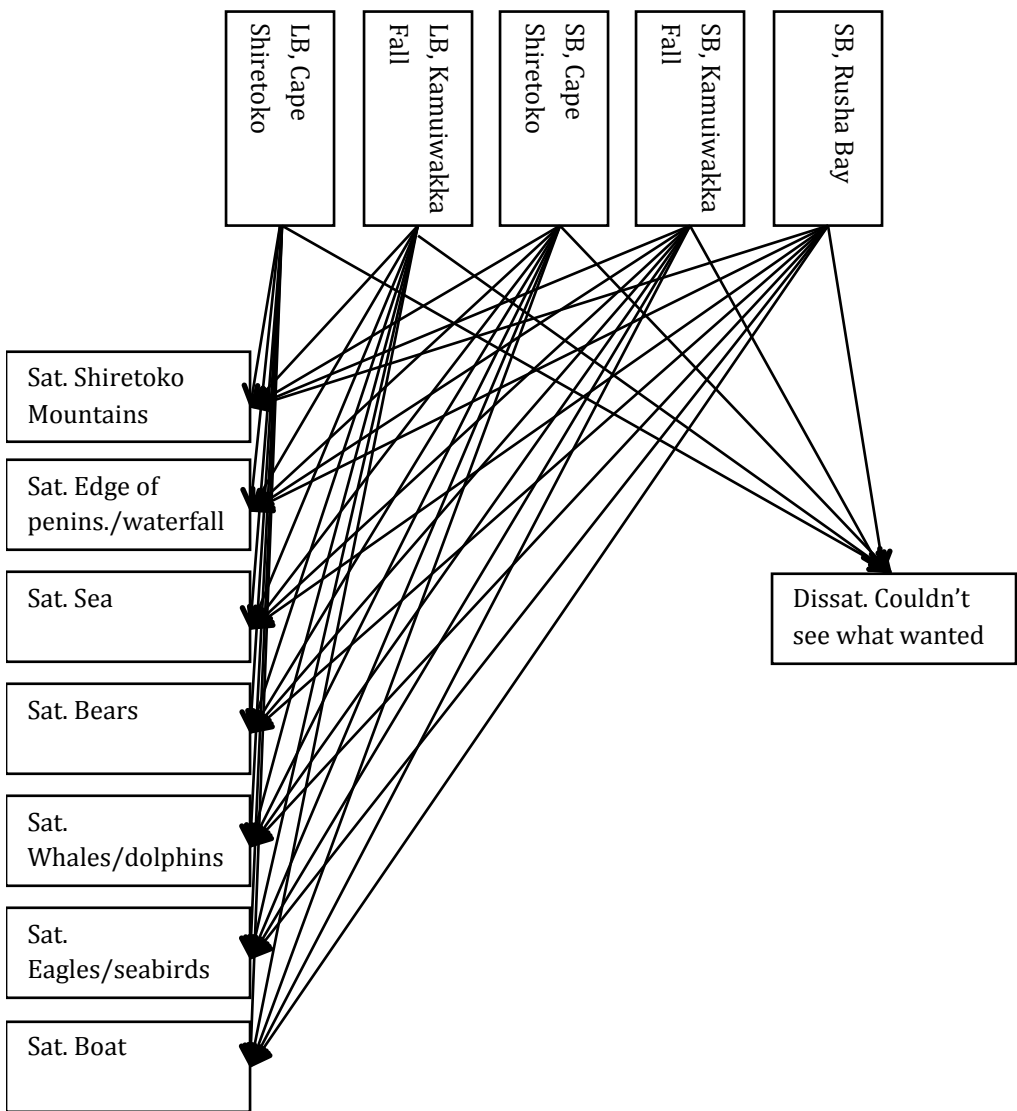


Figure 1: Estimated path model. $\chi^2/\text{Df} = 1.207$, CFI = .996, RMSEA = .011, $\chi^2(62) = 74.864$ (p-value = .127)

Table 3 first gives an overview of the shared parameter estimates for which no significant group differences were found.

Table 3: Unstandardized ML estimates: Shared between all groups

	Estimates (se)
Satisfaction landscape: Shiretoko Mountains	
->LB, Cape Shiretoko	.387 (.031)***
->LB, Kamuiwakka Fall	.260 (.038)***
->SB, Cape Shiretoko	.177 (.036)***
->SB, Kamuiwakka Fall	.240 (.048)***
->SB, Rusha Bay	.115 (.043)**
Satisfaction landscape: Edge of peninsula/waterfall	
->LB, Kamuiwakka Fall	-.114 (.041)**
->SB, Cape Shiretoko	-.174 (.038)***
->SB, Kamuiwakka Fall	-.081 (.052)
Satisfaction landscape: Sea	
->LB, Cape Shiretoko	-.056 (.025)*
->LB, Kamuiwakka Fall	-.087 (.031)**
->SB, Cape Shiretoko	-.125 (.029)***
->SB, Rusha Bay	-.118 (.035)***
Satisfaction: Boat/kayak	
->LB, Cape Shiretoko	-.416 (.026)***
->LB, Kamuiwakka Fall	-.431 (.030)***
->SB, Cape Shiretoko	-.375 (.030)***
->SB, Kamuiwakka Fall	-.420 (.041)***
->SB, Rusha Bay	-.380 (.036)***
Satisfaction wildlife: Bears	
->LB, Cape Shiretoko	-.011 (.024)
->LB, Kamuiwakka Fall	-.090 (.028)**
->SB, Cape Shiretoko	.642 (.028)***
->SB, Kamuiwakka Fall	.119 (.039)**
->SB, Rusha Bay	.682 (.034)***
Satisfaction wildlife: Whales/dolphins	
->LB, Cape Shiretoko	.090 (.022)***
->LB, Kamuiwakka Fall	.081 (.026)**
->SB, Cape Shiretoko	.138 (.025)***
Satisfaction wildlife: Eagles/seabirds	
->LB, Kamuiwakka Fall	-.097 (.031)**
->SB, Cape Shiretoko	-.071 (.029)*
->SB, Rusha Bay	-.080 (.036)*
Dissatisfaction: Not seen what I wanted	
->SB, Cape Shiretoko	.070 (.033)*
->SB, Kamuiwakka Fall	.321 (.044)***
->SB, Rusha Bay	.026 (.040)

Note: * p-value<.05, ** p-value<.01, *** p-value<.001

These results thus show the direct relationship between the different cruise types and routes and satisfaction with the wildlife and landscape elements. Five boat type-route combinations were identified: large boats to Cape Shiretoko, large boats to Kamuiwakka Fall, small boats to Cape Shiretoko, small boats to Kamuiwakka Fall, and small boats to Rusha Bay. Sea kayak as a sixth possibility was excluded since only k-1 dummy categories can be identified for reasons of convergence. As such, the other boat and route types will be compared with the reference category 'sea kayak' in the result section.

Analysing the regression estimations of Table 3, it is noticeable that all boating types are positively correlated with satisfaction on seeing the Shiretoko Mountains. As was previously stated, these results need to be interpreted in comparison with the reference category of sea kayaks, this suggesting that comparatively larger sea vessels are more appropriate for people interested in seeing the Shiretoko Mountains. This also holds true for the difference between larger and smaller cruise ships, where larger ships outperform the smaller ones on this aspect. However, when we consider other landscape elements, sea kayaks generally seem to offer better experiences, leading to a higher rate of satisfaction with seeing waterfalls, the edge of the peninsula or having an experience at sea. Tourists also seemed to be less satisfied with the boating experience as such on larger ships than on smaller ships or sea kayaks. This result thus seems to suggest that visitors interested in a boating/kayaking experience would primarily choose a sea kayak.

If visitors are interested in wildlife, specifically bears as was noticed in Table 2, the results seem to suggest that sea kayaks, large boats, as well as the Kamuiwakka Fall route, are less optimal choices. The Cape Shiretoko route seems best for visitors interested in spotting whales and dolphins, since there is a positive effect of these routes on the satisfaction with this wildlife category. Furthermore, large boats (for boat routes) increase satisfaction which is possibly related to the fact that these boats sail farther from the shore. Conversely, sea kayaks have a positively influence on eagle and seabird spotting, since this form of wildlife can be found closer to the shores.

Finally, with the exception of the Rusha Bay route, both other routes with small boats have a higher chance of leading to dissatisfaction, because not all the pre-trip expectations about the sights to see were met. This seems especially true for the Kamuiwakka Fall route by small cruise ship.

Table 4 presents the most important results regarding the research question of this paper: the difference in parameter estimates between groups of respondents as a result of their information search. As a first general conclusion, we can deduct that tourists that did not use the internet/guidebooks or local information generally outperform both other information sources. With regard to large cruises to Cape Shiretoko, prior information from internet or guidebooks significantly lowers satisfaction with both landscape elements (edge of peninsula/waterfall) and wildlife elements (eagles/seabirds) and results in a higher level of dissatisfaction because some aspects were not observed during the trip. While local information sources seem to provide for more accurate expectations concerning the landscape elements of the Cape Shiretoko trip, they further lower satisfaction with eagle and seabird spotting.

The opposite holds true for the Rusha Bay trip by small boat. Here local information significantly lowers the satisfaction from seeing the edge of the peninsula or waterfalls over and above internet and guidebooks. Again, uninformed tourists (or tourists informed by friends or relatives) are less likely to be dissatisfied, while the latter group is significantly more satisfied with the spotting of whales and dolphins too.

Information via internet or guidebooks furthermore lowers satisfaction with the experience at sea for the Kamuiwakka Fall route by small boat. Local information on the other hand, has a negative effect on the satisfaction with seeing eagles and seabirds. Here too, visitors not informed through either of both information channels are more likely to be satisfied with seeing whales and dolphins on route.

Lastly, visitors on large boats sailing to Kamuiwakka Fall are generally more dissatisfied with the view, when they had previously consulted internet or a guidebook. However, no information also leads to a slightly higher dissatisfaction on this route.

Table 4: Unstandardized ML estimates: Group-specific

	Estimates (se) internet/ guidebook	Estimates (se) Local info	Estimates (se) Neither of both
Satisfaction landscape: Edge of peninsula/waterfall			
->LB, Cape Shiretoko	-.218 (.045)***	-.144 (.092)	-.066 (.044)
->SB, Rusha Bay	-.245 (.059)***	-.310 (.105)**	.014 (.082)
Satisfaction landscape: Sea			
->SB, Kamuiwakka Fall	-.183 (.048)***	-.100 (.074)	.117 (.086)
Satisfaction wildlife: Whales/dolphins			
->SB, Kamuiwakka Fall	-.017 (.043)	-.053 (.062)	.146 (.070)*
->SB, Rusha Bay	.065 (.039)	-.046 (.063)	.129 (.050)**
Satisfaction wildlife: Eagles/seabirds			
->LB, Cape Shiretoko	-.107 (.035)**	-.163 (.072)*	-.021 (.031)
->SB, Kamuiwakka Fall	-.044 (.051)	-.263 (.083)**	.053 (.080)
Dissatisfaction: Not seen what I wanted			
->LB, Cape Shiretoko	.343 (.039)***	.206 (.073)**	.213 (.039)***
->LB, Kamuiwakka Fall	.311 (.055)***	.037 (.089)	.114 (.045)*

Note: * p-value<.05, ** p-value<.01, *** p-value<.001

Discussion

A mismatch between the expectation created by the visitors based on the information about the site and the satisfaction they experience when visiting the place can potentially be a strong factor of dissatisfaction, with negative implications for the possible recommendations and loyalty. It is important to notice that the visitors to Shiretoko Peninsula are extremely loyal to the destination, with over 90% expressing an intention to return and/or recommend the destination. General levels of satisfaction are high, especially for the landscape elements of the trip, while the

destination offers further leisure possibilities such as hot springs, walking paths, the UNESCO World Heritage Centre (and on site visitor center) and different other destinations in the area. Nonetheless, it remains important to monitor potential negative impacts on these general satisfaction levels in order to remain able to provide a qualitative and attractive experience and maximize visitor loyalty.

The differences in coefficient estimates between groups allows for some interesting conclusions regarding the quality of information provided on different routes. Information available on the internet and via guidebooks seems to negatively affect satisfaction on certain elements and routes. Specifically the large boat cruises to Cape Shiretoko and the small boat cruises to Kamuiwakka Fall are not optimally represented. Further research could ideally capture the specific websites and guidebooks used, after which additional action could be undertaken in order to improve representation of the cruises.

Local information from tourist offices, hotels and local shops is less problematic, even though representation of landscape elements (views of the edge of the peninsula and waterfalls) is suboptimal for the Rusha Bay route, while information regarding the large boat cruises to Cape Shiretoko and small boat cruises to Kamuiwakka Fall might lead to unfulfilled expectations regarding the possibility for eagle and seabird spotting. It is advisable to inspect the messages and images used by the local contact points regarding these aspects and possibly alter them in order to create realistic expectations.

Finally, when comparing the effect on the dissatisfaction measurement, local info does outperform the subsample of people who were not informed or informed by family and friends. Clearly, respondents that only checked online sources or were inspired by a guidebook, were more like to experience dissatisfaction.

More transparent and realistic information about what can be enjoyed on each kind of boat trip can help to reduce the observed mismatch between the tourists' expectations and the satisfaction they experienced contributing to better planning of the trip, and a greater effort to attract more young visitors, considering the high levels of satisfaction and loyalty achieved by those who experience the kayak trips, are the main management recommendations arising from this study. Nevertheless, it should also be noticed that the number of visitors should respect the need to preserve the ecological characteristics of this extraordinary site.

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